



*Wood Supply Research Institute*

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## **Causes and Costs of Unused Logging Capacity:**

### **Old Lessons Still True?**

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Excess, or unused, logging capacity still appears to be a source of cost and concern to the wood supply value chain in many regions of the United States. Since 2002, WSRI has done a number of studies that shed light on the factors that drive this inefficiency in the system. A review of the findings from WSRI's first research project on this subject suggests that there are actionable steps that progressive members of the wood supply value chain can take to improve what appears to be a pervasive source of frustration and lost economic opportunity.

#### **Finding**

- WSRI research documented that the wood supply system in the southern USA and Maine in 2002 did not utilize approximately 35% of its capacity. The cost of this unused capacity was estimated to be \$1.66 per ton equating to \$430 million per year in the southern USA alone. Conservative estimates of the amount that could be saved through targeted action ranged from \$130 to \$300 million.

#### **Lessons Learned**

- That kind of money should encourage ongoing attention to this source of system waste. Evidence that the situation is regionally as bad, if not worse, today is supported by assessments of both suppliers and consumers.

#### **Take Action**

- Stay focused on the fact that idle capacity in the logging business costs a lot of money and weakens the health of the system.

#### **Finding**

- "Market factors", primarily "wood order constraints" was the most common cause of unused capacity documented. Mill purchase patterns, the stability of wood purchases by mills in each market area, and wood procurement practices and approach were referenced as being of special importance.

#### **Lessons Learned**

- Demand constraints are not necessarily the same as mill consumption. They can be driven by inventory management, the sophistication of the planning system, communications, and the degree of cooperation between supplier and consumer including whoever controls the stumpage. Applying statistical process control (SPC)

techniques to inventory management is a well-documented strategy for establishing quotas that can be communicated, are reasonably dependable, and optimize supply system capacity.

### **Take Action**

- Buffer the supply stream from shocks with sophisticated short, medium, and long-term supply plans. Use SPC to proactively manage inventory levels. Avoid knee jerk, short notice changes.



*Wood inventory management strategies can impact logging and trucking utilization in positive or negative ways.*

### **Finding**

- Measures of mill usage consistency (UCR) and material purchase consistency (PCR) were developed and explained in the 2002 report. Mills where the ratio of PCR to UCR is high create a more predictable market for their wood than mills where the ratio is low.

### **Lessons Learned**

- UCR and PCR are easy to calculate. Applied at the local level, they can be used to compare mills and set performance targets. They might also be used to evaluate the impact of usage and purchase patterns on supplier productivity.

### **Take Action**

- Set targets specifically designed to improve capacity utilization and measure the performance of your system against them.

### **Finding**

- “Preferred” supplier crews delivered more loads per week, missed less production, worked fewer days, delivered to more markets, and moved for undesirable reasons less often than non-preferred crews. They also reported the lowest and least variable costs per ton.

### **Lessons Learned**

- Close relationships, good communications, good target-setting and good planning can positively impact capacity utilization. Supplier and logger are not always the same thing. The positive elements of a preferred supplier system have to make it to the logger level for capacity utilization to be enhanced.

### **Take Action**

- Identify “preferred” suppliers based on performance metrics. Negotiate targets for production and consistency. Collaboratively measure, monitor, and review progress relative to the targets.



*Idle capacity adds cost to the wood supply chain.*

### **Finding**

- Loggers who did not use contract hauling reported median costs that were 11% lower (although more variable) than those using contracting for some or all of their trucking. They also reported missing less production than their counterparts using contract trucking. However, an econometric analysis designed to examine production inefficiency that was part of the study found that contract hauling can bring some efficiency to the process.

## **Lessons Learned**

- Crews that control their trucking tend to have more control over their business opportunities. The risk of missing production opportunities in a piece-rate business with uncertain weekly, and even daily demand is high pushing many operators to work with fixed fleets. The efficiency opportunities that may exist when trucking capacity is more flexible will require better cooperation and communications across the wood supply value chain.

## **Take Action**

- Pay attention to anything that constrains trucking (mill turn-times, trucking/logging imbalances due to timber or mileage, etc.) and do what you can to minimize them. Find a local initiative addressing one of the many issues facing the trucking industry and participate.

The above findings all support a major conclusion of this and other WSRI capacity studies. It is that positive action to address wood supply value chain inefficiencies often requires collaboration between the parts of the chain. In fact, it is often the case that the lost opportunity being faced by one part of the chain is primarily under the control of another part. Individuals looking for value from WSRI reports need to start by asking themselves, “do I, or does the part of the chain I represent, have options when it comes to addressing the opportunity, regardless of where that opportunity lies?” Considering the findings of this logging capacity study, appropriate questions might be:

- Do I focus on logging capacity utilization? Do I accept that poor utilization of capacity is a cost to the system?
- Do I, or does the organization I represent, take action to minimize market constraints? What analytical, planning, and communications tools do we use to track capacity and dampen volatility? Do we use performance measures like UCR, PCR or other process control techniques that could help?
- Are we part of, or do we manage, a preferred supplier system? Do we negotiate sensible, economically sustainable production expectations, track what we negotiate, and make adjustments to meet the targets in smooth and reasonable ways?
- Do we work to facilitate hauling efficiency from the woods to the mill? Do we have reasonable turn-time targets and a plan to meet them? Are we engaged and active when it comes to addressing issues associated with trucking? Do our actions support or hinder trucking efficiency, safety and quality?

Where the honest answer to these questions is “no” or “not so much”, WSRI research shows that there is significant value being lost in your wood supply chain.

Go to [WSRI.org](http://WSRI.org) for more information on factors that affect the wood supply value chain.